

22. **A. drupacea** McBr. Diffuse shrub 3 to 9 (or 15) ft. high; leaves elliptic, obtuse but abruptly mucronate, glaucous, minutely pubescent or subglabrous,  $1\frac{1}{4}$  to  $2\frac{1}{4}$  in. long; branchlets and inflorescence glandular short-pilose and pubescent; pedicels and bracts pink; pedicels 6 to 7 lines long; bracts membranous, lanceolate, 2 to 4 lines long, deciduous; sepals whitish, glandular-ciliate; berry red, oval, 3 lines long, the surface rugose and glandular short-hairy; stone solid.—Mts. and mesas of S. Cal. from the San Bernardino Mts. to the Cuyamaca Mts., 2000 to 7500 ft.; s. to L. Cal.

23. **A. bicolor** (Nutt.) Gray. Shrub 3 to 6 (or 10) ft. high; leaves coriaceous, brittle, oblong or elliptic, tapering to base and apex, tending to be revolute, dark green, shining and glabrous above, white-tomentose or felt-like beneath, 1 to  $2\frac{1}{2}$  in. long; pedicels and calyx at first densely tomentose; calyx dark red; corolla rose-color, 4 lines long; ovary a little hairy at summit; berry reddish, eventually with smooth highly polished dark red or almost black surface, 3 to  $3\frac{1}{2}$  lines broad; style-base persistent as a sort of short beak or papilla; stone solid, smooth.—W. San Diego Co.; Santa Cataline Isl.; L. Cal.

## TWO BOTANISTS ON SIBIJAK VOLCANO<sup>1</sup>

ALICE W. YATES

Brastagi, Sumatra,  
Dutch East Indies,  
May 10, 1922.

A few days ago Mr. Yates and I climbed the volcano "Sibijak." It is such an interesting trip from a botanical point of view that it occurred to me you might like to hear about it. The jungle always reminds me of the illustrations in Schimper. When I struggled through that book in your Forest Botany course in college, I never thought I should see those scenes myself.

The mountain is only 7500 feet high, while the surrounding country is 4500 feet. But it is a very hard climb, for a steep ridge must be crossed before reaching the mountain.

"Sibijak" is an active volcano and is quite the most wonderful sight I have ever seen. The top has been entirely blown off, leaving the jagged edge surrounding the crater. A huge crack extends almost to the base, containing many fumeroles giving off steam and sulphur; so that the rocks on either side of the crack are colored bright yellow. In the bottom of the crater is a sulphur lake. There are innumerable small fumeroles in the crater besides three large ones. One opening is about five feet across, the sulphur fumes roaring out of it with tremendous force. Another smaller opening gives off steam with a roar like that of a steam engine. The top of the mountain is covered with the crystallized sulphur, which makes a beautiful picture.

The variation in the vegetation from the foot of the mountain to the top is very noticeable. First, the trail leads through dense tropical jungle, with the trees close together and very high, covered with lianes, birds' nest ferns and mosses. We occasionally caught a glimpse of the monkeys swinging from one tree to another. We saw

<sup>1</sup>Extracted from a letter. Dr. and Mrs. Yates have been for some years in the Philippines but are now stationed in Sumatra.—W. L. JEPSON.

here wild durians, figs, begonias, many rattans, Balanophora, Mussaenda, Hymenophyllum and other tropical friends.

Then the trees became lower and less dense and we saw *Quercus* species, *Ardisia*, *Freycinetia*, *Marantaceae*, to name only a few of the more noticeable ones. Higher up the vegetation became more and more stunted and we came to dense stands of pandan, *Ericaceae*, *Dianella*, *Vaccinium*, *Gualtheria*, *Histiopteris* and *Gleichneria*. There was no vegetation at the rim of the crater, but down in the crater we saw *Melastoma* and *Gahnia*.

We made this same trip last year when Mr. Yates collected some 110 species which he sent to the Bureau of Science in Manila for determination. He requested Mr. Merrill to send a set of the specimens to the University of California; so you will receive them eventually.

We are enjoying our holiday here in the hill country of Sumatra where it is delightfully cool. The climate is almost like that of Berkeley in the spring time. Brastagi is about 250 kilometers from Kisaran, where the United States Rubber Company have their large rubber plantation, and where we live. There is a colony of Americans and British people at Kisaran, about twenty. I believe there are not more than twenty Americans in all Sumatra. There is an American Consul in Medan and the ever present missionaries.

For diversions we have golf and tennis and the club at Kisaran. Mr. Yates enjoys the hunting very much,—elephants, tigers, crocodiles and wild pigs. A herd of about twenty elephants often comes within ten miles of our place.

We will be in the States just two years from now and hope to see you then. Mr. Yates joins me in sending best regards.

#### SIR JOSEPH HOOKER OAK (*QUERCUS LOBATA* NEE)

We spent one night under the spreading branches of the famous Joseph Hooker Oak near Chico. I took a few measurements. In order for the local enthusiast to boost the size of the tree, the girth is taken at 8 feet above the ground instead of the usual 4 feet. I find that at 4 feet above the ground the circumference is 22 feet 3 inches approximately. The tree is in exceedingly fine health and vigor, and shows a goodly supply of half grown acorns on many of its branches. I was particularly struck with the amount of young growth coming up under the tree. In a space exactly 10 feet square, i. e., 100 square feet, I counted 17 young oaks about 6 to 12 feet high. There is a large board placard swinging in the tree which reads:

#### SIR JOSEPH HOOKER OAK

Height of tree.....	101 feet.
Circumference of tree 8 feet from ground.....	28 feet 2 inches.
Spread of north and south branches.....	147 feet.